

RECORDS OF THE QUEEN VICTORIA MUSEUM
LAUNCESTON

FLORE OF THE NUT

WITH BRIEF ACCOUNT OF BOTANICAL
INVESTIGATION IN THE
CIRCULAR HEAD DISTRICT

by

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LOCALITY MAP

1910

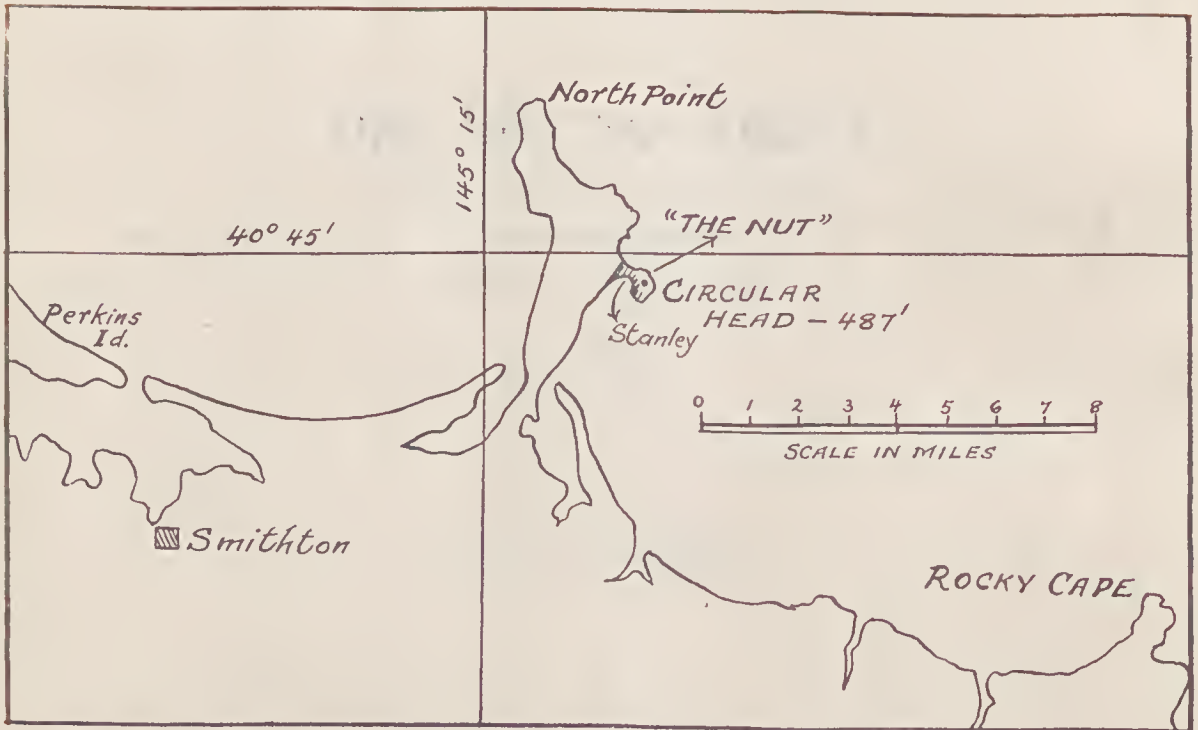


Figure 1. LOCALITY MAP.

HISTORICAL AND GEOLOGICAL NOTES

Captain Matthew Flinders, in company with George Bass, discovered and named Circular Head on 5 December 1798, during their noteworthy circumnavigation of Van Diemen's Land (Tasmania) by the sloop Norfolk. Other conspicuous Tasmanian landmarks named by them in this region were Table Cape, Rocky Cape, Three Hummock Island, Trefoil Island and Cape Grim. Flinders (1814) thus described Circular Head bluff, which is now generally called The Nut:

"a clifty lump, much resembling in form a Christmas cake, joined to the main by a sandy isthmus".

The *Hobart Town Almanack* for 1831 referred to it as "that curious rock (which) stands like a huge round tower or fortress, built by human hands", while naval surveyor J. Lort Stokes (1846) calls it "a singular clifty mass of trappean rock, rising abruptly from the water till its flattened crest reaches an elevation of 490 feet." The Nut is certainly one of the most prominent and dramatic features of the coastline in northern Tasmania, if not in the whole Commonwealth.

Edward Curr, the very energetic chief agent of the young Van Diemen's Land Company (formed in May 1824), reached Hobart from England on 4 March 1826, and soon afterwards he chose Circular Head as the Company's chief establishment. On October 24th, the first party of settlers arrived there by the Company's chartered vessel *Tranmere* and by 1831 Curr had erected a home-stead at "Highfield" — a basaltic upland situated at the north-west extremity of Godfrey's Beach, about 1 mile from The Nut.

The first recorded ascent of this imposing bluff was by Stephen Adey at the end of June 1826. Adey was Superintendent of Farms and Stock for the V.D.L. Company's land grants in N.W. Tasmania whither he had gone exploring on foot from the Forth River with Alexander Goldie, the Agricultural Advisor to the Company. In Adey's words, Circular Head consisted of "a stupendous rock of granite, whose area is upwards of 40 acres with good soil on the top and whose height is 6 or 700 feet". Obviously Adey was no geologist, and his estimates of both area and height are wide of the mark. All subsequent observers have recognised the volcanic nature of Circular Head, but it was left to W. T. Twelvetrees, Government Geologist of Tasmania, in consultation with Professor Rosenbusch (1903) to investigate the rock-mass petrologically; they found its alkali percentage (6.8%) twice that of ordinary basalt. Twelvetrees (1903) made no comment on the character of the effusion or course of physiographic events leading to the present configuration of The Nut. T. Stephens (1908), in discussing the geology of the North-West Coast of Tasmania, assembled his "old notes, with a few supplementary observations", but he also was silent regarding the genesis of The Nut.

A. B. Edwards (1941), expounding his belief that The Nut was an exposed and eroded laccolith, went deeper into its petrology and referred the rock to columnar analcite-olivine-dolerite; in an earlier paper (1941) he had also assigned Table Cape and Mt. Cameron West to laccoliths of similar composition. E. D. Gill and M. R. Banks (1956) disputed Edwards's postulation, expressing the opinion that The Nut is basaltic and a remnant of a

volcanic neck intruded through tuffs, whereas Mt. Cameron West "is simply a thick flow or series of flows" of basalt.

Commander Stokes (1846) had measured The Nut's maximum height as 485 ft. Dr. Edwards (1941, pp. 247, 249) gave a figure of 460 ft., but in his later paper (p. 403) the height is changed to 487 ft. which is much closer to Stokes's original estimate. Edwards described the shape as approximately circular and the diameter as between 800 and 900 yards. Actually, the summit plateau is broadly elliptical, with a maximum longer diameter of 900 yds. but a shorter one of only 600 yds.; it contains an area of 180 acres.

Small steeply sloping screes fringe the northern and eastern bases where sheer cliffs rise 400 ft. above the open ocean, while on the landward southern and south-western sides the scree-slopes are gentler and higher — up to about one third of the total height. Two shallow valleys, east and south sloping, combine to form a hanging valley that empties toward the south-eastern side over a lip some 160 ft. lower than the highest sector at the north-west. The rainfall averages about 36½ ins., and is concentrated during winter months.

The Nut is now owned by the Federal Government, and is supervised by the Postmaster-General's Department which leases it for grazing purposes.

VEGETATION, PAST AND PRESENT

The writer's interest in plants that grow on The Nut was first aroused when, residing at Stanley as a boy (1920-24), one of his favourite recreations was to climb its escarpments or explore the boulder-strewn base. A collection of local grasses was also made at the request of his schoolmaster. After an absence of more than 40 years, he returned late in January 1965 and was able to carry out a survey of the species now represented — both indigenous and introduced. A few small seasonal plants, and perhaps some rarities, may have been missed at the height of summer, but the accompanying census is believed to be fairly complete for vascular species. A deterioration in the communities of native plants during the past four decades is apparent, the factors chiefly responsible being: sheep and rabbits (grazing both on the landward slopes and upon the crest), encroachment of aggressive weeds (especially gorse), and occasional fires*. Despite these destructive agencies, at least 100 indigenous species of flowering plants and ferns manage to survive on The Nut, all being of wide distribution in other parts of Tasmania and all ranging to southern Victoria.

The very similar, but rather higher, Table Cape near Wynyard still supports a considerable area of eucalypt forest. James Backhouse (1843), who saw this bluff in a state of nature, gave the following description of it on 14 November 1832:

pp. 110-111 —

"After ascending to the top of Table Cape, we passed over some rich, red loam, clothed with luxuriant vegetation. Fern, Prickly Acaia, and Musky Aster were so thick as to be passed with difficulty. Tree-ferns were numerous, and many lofty shrubs were overrun with Mnequarie Harbour Vine and White Clematis. Above the shrubs, rose stately Stringybarks and White Gums, attaining to about 200 feet in height. Here and there, a tree had fallen across the path, which was but indistinctly traced in places, and when left was not easy to find again."

* The last major conflagration was in 1961.

It seemed reasonable to assume that the climax vegetation on The Nut — now virtually treeless — would also have been forestal at the time of white man's appearance; but probably, from its more exposed situation, the eucalypts were somewhat sparser and not so tall as on Table Cape which abuts against fertile inland flows of basalt. A search was therefore made for any early references to the original flora at Circular Head. The earliest glimpse comes from Ida Lee (1927) who published Mrs. Rosalie Hare's account of the voyage of the *Caroline*, written just a century before. Mrs. Hare landed from the *Caroline* at the site of Stanley on 20 January 1828, and thus describes The Nut:

p. 33 —

"The Head, justly called Circular, presented a rather desolate sight. Here were plenty of trees, but they were of Stringey-Bark, so called from their bark continually falling off and hanging in strings."

p. 35 —

"The height of Circular Head appears about four hundred feet. I ascended it in company with the surgeon without much difficulty. We found sheep grazing on its summit and kangaroo leaping about in all directions."

Much more space is devoted to the aborigines observed by Mrs. Hare during her stay of about six weeks at Circular Head; but it is interesting to note that sheep were competing with kangaroos for native pasture on the summit only 15 months after the initial settlement. Kangaroos have long since vanished from this district, but plenty of sheep continue to browse over The Nut at the present time. The Stringybark trees would undoubtedly have been *Eucalyptus obliqua* (Messmate Stringybark) which has also disappeared from Stanley Peninsula, although it is a dominant tree in forest land to the south and still grows on the Table Cape headland. Records of the V.D.L. Company disclose that by 1831 (four years after settlement began) there were saw-pits, yards for sheep and cattle, almost 12 miles of post and three-rail fencing and also some chock-and-log fences at Circular Head. It is highly probable that much of this timber came from the forested lower slopes of The Nut, which were simultaneously put to use as grazing land for stock.

In the Archives Section of the Tasmanian State Library are two old photographs of The Nut, made about 1858. These show scattered living trees around the summit, while numerous taller dead trees and bleached fallen trunks dot the scree slopes above Stanley village — pathetic relics of the stringybark forest seen by Mrs. Hare 30 years before. In *Bailliere's Tasmanian Gazetteer* for 1877 by R. P. Whitworth (p. 39) it is stated, concerning The Nut, that "on the summit are several acres of good land covered with timber". There is a strong local tradition that trees were once felled on the top and their trunks rolled down the slopes for firewood for the townsfolk.

Not a vestige now remains even of old tree stumps on the weathered screes near the township, nor on the flattened summit area which at one time was utilised for crops of potatoes — sledged down the gentler inclines at no little difficulty. Along the western and north-western scarps a few windswept, very depauperate examples of *Eucalyptus viminalis* (Manna Gum) persist in the form of unhealthy regrowth from burn-out trunks; these miserable thickets may constitute a remnant of the eucalypt woodland formerly covering the plateau. Equally stunted are the survivals of *Acacia melan-*

ozylon (Blackwood) along the southern slopes. Four other kinds of small trees, *Banksia marginata*, *Bursaria spinosa*, *Pomaderris apetala* and *Melaleuca ericifolia*, still flourish on the sides of The Nut in fair quantity, vigorous old specimens even clinging to crannies on the exposed northern rock-walls above the sea. Trunks of *Bursaria* frequently assume a picturesque, almost horizontal posture in response to the strong prevailing winds. Conspicuous among the present larger shrubs are *Rhagodia oacata*, *Correa alba*, *Styphelia parviflora*, *Myoporum insulare* (against the sea), *Goodenia ovata* and *Olcaria phlogopappa*, while the tall perennial groundsel *Scenecio linearifolius* is locally frequent in sheltered gulches. A single large bush in a steep ravine on the N.E. declivity has been tentatively identified as *Olcaria argophylla* — by ocular inspection from some distance. Scattered old shrubs of the attractive coastal Crimson-berry (*Styphelia oxycedrus*) occupy crevices on the more precipitous northern and southern cliffs, but few seedlings are in evidence.

Some plants characteristic of coastal dunes and ocean cliffs form a lower selva to the steep north and west faces of The Nut, viz *Distichlis distichophylla*, *Stipa teretifolia*, *Lepidosperma gladiatum*, *Carpobrotus rossii*, *Apium prostratum*, *Alyxia buxifolia* and *Sonchus megalocarpus*, only the *Alyxia* (Sea-box) being a shrub. Strangely enough, *Calocephalus brownii* (Cushion-bush) is absent, although it inhabits basalt cliffs at "Highfield" only 1-2 miles to the north-west. Singular also is the apparent absence of *Muehlenbeckia adpressa* (Macquarie Vine) which Backhouse noted as so rank at Table Cape in 1832.

Indigenous herbs have been largely replaced by introductions, e.g. numerous grasses, clovers and thistles. Tussock-forming *Lomandra longifolia* (Sagg) and *Diplarrcna moraea* (White Iris), however, are still abundant over the plateau, the latter competing successfully with alien grasses. No species of orchid has been recorded from The Nut, but the family is never well represented on basaltic terrain in southern Australia. One decorative herbaceous perennial, *Helipterum albicans* var. *incanum* (Hoary Sunray), formerly grew in quantity on ledges and in rock crevices overlooking Stanley township whence it has virtually disappeared through picking, for the sake of its large pink and white, papery flower-heads; a few colonies survive on more inaccessible cliff-tops of the northern and eastern sectors. Other perching herbs of cliffs and ledges are *Luzula campestris*, the lilies *Bulbine bulbosa* and *B. semibarbata*, *Scleranthus biflorus*, *Crassula sicberiana* (abundant), *Pelargonium australe* (scattered).

Bryophytes are a conspicuous part of the ground flora, on rock-faces and damp or shaded earth. Thirty five species were noted by the writer in January 1965 and their names are appended, but the list is by no means complete since a number of minute ephemeral mosses would not be in evidence at that season. Probably the commonest moss is *Lembophyllum clandestinum* which covers boulders and walls of rock along much of the towarded slopes. The cosmopolitan tufted species, *Ceratodon purpureus* and *Weissia controversa*, are also very frequent on earth or rock. The odorous hepatic, *Plagiochila fasciculata*, was noted only under low shrubberies above a steep scree near the old breakwater (N.E. sector), but *Frullania falciloba* is as common as *Lembophyllum* on rock surfaces where

its closely appressed, flattened ramifications impart a reddish-purple tinge. Lichens are also plentiful—on rock, soil and dead wood everywhere. However, only a dozen species of the larger and more easily recognisable kinds were collected and identified. No attempt was made to list the fungi at such a very unfavourable season.

FERN FLORA

Thirteen species of ferns are present on The Nut, but only two are at all widespread or frequent: ubiquitous Bracken (*Pteridium esculentum*) and Kangaroo Fern (*Microsorium diversifolium*) in rock-fissures and on damp shaded walls. Four species — all of rare occurrence — are restricted to a wet gully-head that drains the hanging valley at the S.E. edge of the scarp (between the old and newer wharves). Here good shelter is afforded the permanent spring by thickets of *McLaleuca*, *Bursaria* and *Pomaderris*; two small specimens of Soft Tree-fern (*Dicksonia antarctica*) are present, also the Hard Water-fern (*Blechnum procerum*). Overlooking the sea, and often drenched with salt spray, on the northern face are some impressive colonies of the very leathery Shore Spleenwort (*Asplenium obtusatum*); but probably the most surprising occurrence on scarps in this vicinity is Gipsy Fern (*Ctenopteris heterophylla*), a species customarily favouring mossy trunks and branches in very shaded fern gullies. *Blechnum minus* was observed only on the earthen walls of a small deep dam excavated near the summit, but it could be present in other places.

GRASSES

The *Gramineae* with at least 30 representative species (11 native and 19 alien) constitutes by far the largest family group on The Nut. It embraces about 19% of the total flora and supports the sheep that have been grazed there intermittently for nearly 140 years. The whole summit area is now a tussock grassland in which the dominant species appear to be *Daetylis glomerata* (Cocksfoot) and *Lolium perenne* (Perennial Rye-grass), variously intermixed with the still vigorous native species *Poa australis* (Tussock Grass) and *Danthonia pilosa* (Velvet Wallaby-grass). Concomitant but less valuable introductions are *Bromus mollis*, *Holcus lanatus* and *Anthoxanthum odoratum*, while weedy annuals include *Vulpia bromoides* and *Aira caryophylla*. It is probable that cocksfoot and rye-grass have been deliberately sown on The Nut for pasture purposes. Kangaroo Grass (*Themeda australis*), which was doubtless widespread in earlier times, now appears chiefly on the western slopes; *Echinopogon ovatus* and *Agropyron scabrum* are mostly weak plants of more shaded rocky places. Entirely coastal and never found far from high-water mark are *Distichlis distichophylla* and *Stipa teretifolia*, the former matted and the latter a large wind-resistant tussock.

INTRODUCED PLANTS AND WEEDS

The naturalised flora of The Nut amounts to no less than 56 species, more than one third of all plants now present. Grasses are most numerous; but there are also 9 leguminous species (clovers, medicks etc.) and 6 of *Compositae* (thistles). Hedges of boxthorn (*Lycium ferocissimum*) were planted on the cleared land by early settlers,

as well as along roadsides on the Green Hills west of Stanley; these are still in existence, but only scattered bushes have appeared far away from the hedges — the seeds doubtless dispersed by berry-eating birds. An astonishing fact is the absence of blackberry (*Rubus fruticosus* agg.) which has spread only too readily in other parts of Circular Head district. A few quite localised shrubs and trees may have been deliberately planted, for example: two old bushes of holly (*Ilex aquifolium*) on the lower slopes behind Bay View Hotel, and one very large, old ivy plant (*Hedera helix*) which has crept up the centre of the southern cliff-face to such a height as to constitute a landscape feature. Water-cress (*Nasturtium officinale*) is confined to a single colony of several square yards on permanently wet soil in the gully-head of the steep S.E. slope; it may have been purposely introduced.

In the appended census of vascular plants, naturalised aliens have been indicated by an asterisk; but the list does not include a large number of weeds that are restricted to private gardens and roadsides adjoining the lower slopes of The Nut, e.g. in such genera as *Polygonum*, *Spergula*, *Ranunculus*, *Capsella*, *Coronopus*, *Sinapis*, *Lotus*, *Erodium*, *Euphorbia*, *Calystegia*, *Bellis*, *Matricaria*, *Arctotheca*, *Taraxacum*.

By far the most troublesome and aggressive weed, that has spread alarmingly in recent years, is gorse (*Ulex europaeus*). This prickly bush now covers several acres along all the gentler slopes above the town and has approached the crest of The Nut in some places. At the request of the Health & Noxious Weeds Inspector for Circular Head Municipality, an extensive spraying programme was carried out during November and December, 1964, with gratifying results; but follow-up treatments will probably be necessary to ensure that no regeneration occurs from dormant seeds. One unfortunate side-effect of the spraying was damage to the few surviving blackwood trees and some other native shrubs, especially near more isolated thickets of gorse. Thick patches of the two tall annual thistles, *Carduus tenuiflorus* and *Silybum marianum*, were also effectively sprayed to prevent seed formation.

CENSUS OF PLANT SPECIES ON "THE NUT"

The present enumeration is divided into three sections: A. Vascular flora (ferns and seed-plants), B. Bryophytes (mosses and hepatics), C. Lichens. Genera in the last two sections are arranged alphabetically, without reference to their family affinities — still debatable among cryptogamic specialists. Vascular species are grouped in families the arrangement of which, with slight modifications, conforms to the systematic scheme adopted by Engler and Prantl in *Die Natürlichen Pflanzenfamilien* (1887-1902).

The names of naturalised alien species are prefixed by an asterisk (*), while the prefixing sign † denotes a species confined to a small fern gully below the S.E. hanging valley. Frequencies of occurrence are indicated by the following abbreviations in Italics after each name and authority:

<i>c</i>	common and widespread
<i>r</i>	rare
<i>vr</i>	very rare (only 1 or 2 individuals noted)
<i>loc</i>	localised
<i>occ</i>	occasional or scattered

A. VASCULAR FLORA

PTERIDOPHYTA

DICKSONIACEAE

†*Dicksonia antarctica* Labill. - *vr*

DENNSTAEDTIACEAE

†*Hypolepis rugosula* (Labill.) J.Sm. - *r*
Pteridium esculentum (Forst.f.) Nakai - *c*
 †*Histiopteris incisa* (Thunb.) J.Sm. - *r*

ADIANTACEAE

Adiantum acthiopicum L. - *r*.
 (near fern gully)

GRAMMITIDACEAE

Ctenopteris heterophylla (Labill.) Tindale - *loc*
 (N.E. scarp)

POLYPODIACEAE

Microsorium diversifolium (Willd.) Copeland -
c (on cliffs)

ASPLENIACEAE

Asplenium flabellifolium Cav. - *occ* (rock crevices)

A. obtusatum Forst. f. - *loc* (N. face, near sea)

ASPIDIACEAE

Polystichum proliferum (R.Br.) C.Presl - *occ*
 (shaded ravines)

BLECHNACEAE

Blechnum nudum (Labill.) Mett. ex Luerss. -
r. (near fern gully)

†*B. procerum* (Forst. f.) Swartz - *r*

B. minus (R. Br.) Ettings. - *loc* (walls of dam
 near summit)

SPERMATOPHYTA

GRAMINEAE

Microlaena stipoides (Labill.) R.Br. - *occ*

**Briza maxima* L. - *occ*

**B. minor* L. - *occ*

**Dactylis glomerata* L. - *c*

Distichlis distichophylla (Labill.) Fasset - *loc*
 (W. base)

Poa australis, sp. agg. - *c*
 (fine-leaved)

**Festuca rubra* L. - *loc* (N.edge)

**Vulpia bromoides* (L.) S.F. Gray - *c*

**Lolium perenne* L. - *c*

**Bromus mollis* L. - *c*

**B. diandrus* Roth - *c*

**B. unioloides* (Willd.) Humb et al. - *occ*

Agropyron scabrum (Labill.) Pal. Beauv. - *occ*

**Hordeum leporinum* Link - *occ*

**Parapholis incurva* (L.) Hubbard
 - *r* (S.W. slope)

**Avena fatua* L. - *occ*

**Aira caryophylla* L. - *c*

**A. ? cupaniana* Guss. - *occ*

**A. praecox* L. - *loc* (N. base)

**Holcus lanatus* L. - *c*

**Anthoxanthum odoratum* L. - *c*

Dichelachne crinita (L.f.) Hook.f. - *c*

Agrostis billardieri R.Br. - *occ*

**A. tenuis* Sibth. - *loc* (S. base)

**Lagurus ovatus* L. - *loc* (chiefly S.W.)

Echinopogon ovatus (Forst.f.) Pal. Beauv. - *occ*
 (in shade)

Danthonia pilosa R.Br. - *c*

Stipa teretifolia Steud. - *loc* (N. & W. near sea)

S. elatior (Benth.) Hughes - *loc* (chiefly W. &
 N.W.)

Themeda australis (R.Br.) Stapf - *loc* (chiefly
 W. slopes)

CYPERACEAE

Scirpus nodosus Rottb. - *occ* (N. & W. slopes)
Lepidosperma gladiatum Labill - *loc* (lower N.
 & W. slopes)

L. laterale R.Br. var. *majus* Benth. - *occ*

†*Carex appressa* R.Br. - *r*

C. breviculmis R.Br. - *occ*

CENTROLEPIDACEAE

Centrolepis strigosa (R.Br.) Roem. & Schult. -
occ (high S. ledges)

JUNCACEAE

Luzula campestris (L.) DC. - *r* (S. face)

†*Juncus pallidus* R.Br. - *occ*

LILIACEAE

Lomandra longifolia Labill. - *c*

Bulbine bulbosa (R.Br.) Haw. - *occ*

B. semibarbata (R.Br.) Haw. - *loc* (S. face)

Dianella revoluta R.Br. - *occ*

IRIDACEAE

Diplarrena moraea Labill. - *c* (on plateau)

URTICACEAE

†*Urtica incisa* Poir. - *r*

PROTEACEAE

Banksia marginata Cav. - *occ*

POLYGONACEAE

**Rumex acetosella* L. - *c*

**R. crispus* L. - *occ* (S. base)

**R. pulcher* L. - *occ* (S. base)

CHENOPODIACEAE

Rhagodia nutans R.Br. - *occ* (crevices)

R. baccata (Labill.) Moq. - *c* (slopes)

Chenopodium glaucum L. - *loc* (N.E. base)

**Atriplex hastata* L. - *loc* (W. & N.W. against
 sea)

Salicornia australasica (Moq.) Eichler - *loc* (W.
 & N. against sea)

AIZOACEAE

Carpobrotus rossii (Haw.) N.E. Br. - *loc* (W. &
 N. near sea)

?*Disphyma australe* (Soland.) J. M. Black - *loc*
 (presence uncertain)

Tetragonia implexicoma (Miq.) Hook.f. - *occ*

PORTULACACEAE

Calandrinia calyptata Hook.f. - *occ*

CARYOPHYLLACEAE

Stellaria pungens Brongn. - *c*

**S. media* (L.) Cyrillo - *occ* (near town)

Sagina apetala L. - *c*

S. procumbens L. - *loc* (N.E. base)

**Cerastium glomeratum* Thuill. - *c*

**Polycarpon tetraphyllum* Loefl. - *c*

**Silene anglica* L. - *occ*

Scleranthus biflorus (Forst. & Forst f.) Hook.f.
 - *loc* (S.W. edge)

*FUMARIACEAE

**Fumaria officinalis* L. - *r* (S. near town)



Aerial view of The Nut (and Stanley).
Photo : by courtesy Department of Lands & Surveys.



(Top): The Nut, far N.W. Tasmania (looking S.E. across Gofrey's Beach, from "Highfield") — Photo.: by courtesy "The Mercury."

(Bottom): Wind-pruned old trees of *Bursaria spinosa* on western declivities of The Nut, Jan. 1965 (direction of growth almost parallel to hill-slope).



(Top): Shore Spleenwort (*Asplenium obtusatum*) in a basalt crevice against the sea — Photo.: Trevor Pescott.



(Left): White Iris or Butterfly Flag (*Diplarrena moraea*), abundant at summit of The Nut — Photo.: Late Fred Bishop.



(Right): White Correa (*Correa alba*), conspicuous on slopes of The Nut — Photo.: Late Fred Bishop.



(Left): Shore Spleenwort (*Asplenium obtusatum*), showing upper and lower surfaces toward apex of soriferous fronds — Photo.: H. J. King.



(Right): Hoary Sunray (*Helipterum albicans* var. *incanum*), dried specimen in Melbourne Herbarium collected by Dr. Joseph Milligan on The Nut, 3 Nov. 1841.

CRUCIFERAE

- Cardamine* ? *heterophylla* Hook. - *occ*
 †**Nasturtium officinale* R.Br. (one large colony)
 **Raphanus raphanistrum* L. - *occ* (S. near town)

CRASSULACEAE

- Crassula sieberiana* (Schult. & Schult.f.) Druce -
c (on rocks)

PITTIOSPORACEAE

- Bursaria spinosa* Cav. - *c*

ROSACEAE

- Rubus parvifolius* L. - *occ*
 **Crataegus oxyacantha* L. - *r* (S. base)
Acacna anserinifolia (Forst. & Forst.f.) Druce -
c
A. ovina A. Cunn. - *occ*

MIMOSACEAE

- Acacia melanoxylan* R.Br. - *r* (S.E. slopes)
A. verticillata (L.Hérit.) Willd. var. *ovoidea*
 (Benth.) Benth. - *occ* (prostrate)

PAPILIONACEAE

- Pultenaea daphnoides* Wendl. - *r* (S. edge)
Bossia prostrata R. Br. - *r* (S. edge)
 **Ulex europaeus* L. - *c* (a pest on S. & S.W.
 slopes)
 **Genista monspessulana* (L.) L.A.S. Johnson 1962
 - *occ* (slopes above town)
 **Trifolium dubium* Sibth. - *c*
 **T. tomentosum* L. - *occ*
 **T. repens* L. - *occ*
 **Medicago polymorpha* L. - *occ*
 **M. lupulina* L. - *loc* (W. scree slopes)
 **Vicia sativa* L. - *occ*
 **V. hirsuta* (L.) S.F.Gray - *occ*
Kennedia prostrata R.Br. - *r* (W. scarps)

GERANIACEAE

- Geranium potentilloides* L'Hérit. ex DC. - *c*
Pelargonium australe Willd. - *occ* (cliffs)

OXALIDACEAE

- Oxalis corniculata* L. - *occ*

RUTACEAE

- Correa alba* Andr. - *c* (among rocks)

EUPHORBACEAE

- Poranthra microphylla* Brongn. - *occ*

*AQUIFOLIACEAE

- **Ilex aquifolium* L. - *vr* (2 plants on lower S.
 slopes)

RHAMNACEAE

- Pomaderris apetala* Labill. - *c* (slopes)

VIOLACEAE

- Viola hederacca* Labill. - *occ* (in shade)

MYRTACEAE

- Eucalyptus viminalis* Labill. - *loc* (few bushes
 on W. declivities)
Melaleuca cricifolia Sm. - *c* (slopes)

ONAGRACEAE

- Epilobium junceum* Forst. f. ex Spreng. - *occ*

HALORAGACEAE

- Haloragis tetragyna* (Labill.) Hook.f. - *occ* (S.
 slopes)

UMBELLIFERAE

- Hydrocotyle hirta* R.Br. ex A. Rich. - *loc* (S.
 cliffs, in shade)
Daucus glochidiatus (Labill.) Fisch. et al. - *occ*
 **Conium maculatum* L. - *loc* (lower S. slopes)
Apium prostratum Labill. - *loc* (W. & N. against
 sea)

ARALIACEAE

- **Hedera helix* L. - *vr* (one old large plant on
 S. face)

EPACRIDACEAE

- Styphelia humifusa* (Cav.) Pers. - *loc* (upper
 S.W. slopes)
S. parviflora Andr. - *c* (slopes)
S. oxycedrus Labill. - *r* (scattered old bushes
 on N. & S. scarps)

PRIMULACEAE

- **Anagallis arvensis* L. - *c*

APOCYNACEAE

- Alyxia buxifolia* R.Br. - *r* (N. & S. cliffs)

CONVOLVULACEAE

- Dichondra repens* Forst. & Forst.f. - *c*

LABIATAE

- **Marrubium vulgare* L. - *loc* (lower S. slopes)

SOLANACEAE

- **Lycium ferocissimum* Miers - *occ* (S.W. & W.
 base)

SCROPHULARIACEAE

- **Vernonia arvensis* L. - *loc* (S. face)

MYOPORACEAE

- Myoporum insulare* R.Br. - *loc* (W. & N.W.
 near sea)

PLANTAGINACEAE

- **Plantago coronopus* L. - *loc* (N.E. base)

RUBIACEAE

- †*Coprosma quadrifida* (Labill.) Robinson - *r*
 †**C. repens* A.Rich. - *vr* (one old bush)
Opreularia varia Hook.f. - *occ*
Galium australe DC. - *occ* (shaded crevices)
G. gaudichaudii DC. - *occ* (among rocks)
 **G. aparine* L. - *occ* (S. base)

CAPRIFOLIACEAE

- †*Sambucus gaudichaudiana* DC. - *r*

CAMPANULACEAE

- Wahlenbergia gracilentia* Lothian - *occ*
W. quadrifida (R.Br.) Alph.DC. - *occ*

LOBELIACEAE

- Lobelia alata* Labill. - *loc* (N.E. base)

GOODENIACEAE

- Goodenia ovata* Sm. - *occ* (slopes)

COMPOSITAE

- Olearia phlogopappa* (Labill.) DC. - *c* (slopes)
O. ? argophylla (Labill.) Benth. - *vr* (one plant
 in N.E. ravine)
Gnaphalium japonicum Thunb. - *occ*
G. lutco-album L. - *loc* (N.E. scree)
Helipterum albicans (A.Cunn.) DC. var. *incanum*
 (Hook.) P.G.Wilson - *loc* (high ledges at
 N. & N.E. scarps)
Leptorhynchus squamatus (Labill.) Lessing -
occ. (S. & S.W. scarps)
Senecio lautus Forst.f. ex Willd. - *c*
S. linearifolius A.Rich. - *occ* (slopes)
S. hispidulus A.Rich. - *occ*
 **S. mikanioides* Otto ex Walp. - *loc* (lower S.
 slopes)
 **Cirsium vulgare* (Savi) Ten. - *c*
 **Carduus tenuiflorus* Curtis - *c*
 **Silybum marianum* (L.) Gaertn. - *loc* (S. & W.)
 **Hypochoeris radicata* L. - *c*
Sonchus megalocarpus (Hook.f.) J.M.Black -
loc (N.E. scree)
 **S. oleraceus* L. - *occ*

B. BRYOPHYTES

MUSCI (Mosses)

- Barbula pseudopilifera* C.Muell. & Hampe - on rocks & earth
B. torquata Tayl. - rocks & earth
Bartramia papillata Hook.f. & Wils. - shaded earth
Breutelia affinis (Hook.) Mitt. - rocks
Bryum billardieri Schwaegr. - earth
B. blandum Hook.f. & Wils. - damp shaded rock walls (N.E.)
B. campylothecium Tayl. - earth
B. dichotomum Hedw. - rocks & earth
Campylopus bicolor (Hornsch.) Hook.f. - rock faces & ledges
C. introflexus (Hedw.) Brid. - earth
Ceratodon purpureus (Hedw.) Brid. - rocks & earth
Fissidens pungens C. Muell. & Hampe - shaded earth
F. taylori C. Muell. - shaded earth
Funaria hygrometrica Hedw. - earth
Grimmia lacvigata (Brid.) Brid. - rocks
G. pulvinata (Hedw.) Sm. - rocks
Hedwigia imberbis (Sm.) Spr. - rocks
Hypnum cupressiforme Hedw. - earth & rotting wood
Lembophyllum clandestinum (Hook.f. & Wils.) Lindb. - rocks

- †*Pterygophyllum dentatum* (Hook.f. & Wils.) Mitt. - wet shaded earth
Rhacomitrium crispulum (Hook.f. & Wils.) W. Wils. - rocks
Rhacopilum convolutaecum (C.Muell.) Mitt. - earth & shaded rocks
Rhynchostegium tenuifolium (Hedw.) Jaeg. - damp earth & fallen sticks
Sematophyllum homomallum (Hampe) Broth. - bark of trees, rocks
Thuidium furfurosum (Hook.f. & Wils.) Jaeg. - earth & shaded rocks
Tortella calycina (Schwaegr.) Dixon - rocks & soil
Tortula papillosa Wils. ex Spruce - bark of old *Bursaria*
Triquetrella papillata (Hook.f. & Wils.) Broth. - rocks & earth
Weissia controversa Hedw. - rocks & earth
Zygodon intermedius Bruch & Schimp. - rock faces

HEPATICAE (Liverworts)

- Frullania falciloba* (Tayl.) Tayl. - rock faces
Lophocolea semiteres (Lehm.) Mitt. - old wood, rocks & shaded earth
Lunularia cruciata (L.) Dumort. - shaded soil
 †*Metzgeria furcata* (L.) Dumort. - damp sticks & shaded earth
Plagiochila fasciculata Lindenb. - shaded earth under shrubs (N.E.)

C. LICHENS

- Caloplaca cinnabarina* (Ach.) Zahlbr. - rocks
Cladonia aggregata (Sw.) Ach. - earth & rotting wood
Lecanora ? sordida (Pers.) Th.Fr. - rocks
Parmelia conspersa Ach. - rocks
Ramalina ecklonii (Spreng.) Mey. & Fw. - dead *Bursaria* twigs
R. sp. - dead *Bursaria* twigs

- Stereocaulon ramulosum* (Sw.) Rausch - shaded rock surfaces
Sticta crocata (L.) Ach. - rocks & earth
Sticta sp. - rocks & shaded earth
Teloschistes chrysophthalmus (L.) Beltr. - dead *Bursaria* twigs
Usnea sp. (barren) - old twigs of *Styphelia oxycodrus*
Xanthoria parietina (L.) Beltr. - rocks & dead bark

BOTANICAL INVESTIGATIONS IN CIRCULAR HEAD DISTRICT

In its original application, the name Circular Head referred only to the detached bluff so named by Flinders; but, with arrival of the Van Diemen's Land Company's pioneers in 1826, it was soon applied to the whole Stanley Peninsula (6 miles long) embracing the 20,000 acres of grazing land granted here to this Company. On page 39 of *Bailliere's Tasmanian Gazetteer* for 1877 the name is used in the latter sense. Eventually there evolved a Circular Head Municipality, including not only Stanley Peninsula itself but a large area of the hinterland between and beyond the Black and Duck Rivers. The locality "Circular Head" appearing for various species of plants in the three major works on the Tasmanian flora, by J. D. Hooker (1855-60), W. W. Spicer (1878) and L. Rodway (1903), implies the last much wider regional sense. Between them Hooker and Spicer ascribed 135 vascular species to Circular Head district, 33 of these being inhabitants of heathland areas and only 12 others being represented now on The Nut. Hooker's 110 records were based exclusively on the collections of Ronald Gunn, but Spicer's 53 records included some of his own collectings and those of correspondents at Stanley. Of the 30 species of orchids cited for Circular Head by Hooker (1858), no less than 18 are now represented by duplicate Gunn collections in the National Herbarium of New South Wales; but, in addition, Sydney Herbarium has eleven other orchid species among the Gunn specimens from this region. (See MS. list of R. C. Gunn's collection of Tasmanian orchids, compiled by the late Rev. H. M. R. Rupp for Sydney Herbarium).

The earliest botanical observer in this far north-western district would seem to have been Robert William Lawrence (farmer at "Formosa" Estate on the Lake River) who made an excursion to Circular Head and Cape Grim about the beginning of 1829, when 22 years of age. Lawrence describes in his diary a liliaceous plant from Circular Head which could only be *Bulbine semibarbata* — still to be found on The Nut. On 3 May, 1830 he received from Dr. J. H. Hutchinson (the V.D.L. Company's doctor and book-keeper at Circular Head) "an assortment of native seeds". This promising young botanist and intimate friend of Ronald Gunn died on his 26th birthday, 18 Oct. 1833.

The Quaker missionary and collector, James Backhouse (1843), landed at Circular Head on 30 Oct. 1832, remarking that Edward Curr had "well fenced fields with luxuriant herbage of ryegrass and white clover". After visiting Woolnorth and Cape Grim, he returned on 13 Nov. 1832 and spent a month with Edward Curr. Apparently he did not climb The Nut — or, at least, there is no description of it in Backhouse's published journal, and he scarcely comments at all on the vegetation of the peninsula. No plant collections seem to have been made here, but type material of *Correa backhousiana* Hook. (1834) was collected by the missionary at Cape Grim. Shortly afterwards, Backhouse journeyed past Rocky Cape and Wynyard to Emu Bay. During the next six weeks (15 Dec. 1832-26 Jan. 1833), and in company with Dr. Joseph Milligan, he made botanical sorties in the triangle between Emu Bay (Burnie), St. Valentine's Peak (sources of the Emu & Hellyer Rivers) and Mole Creek. Probably his most significant collection,

while in this region, was the type specimen of Gunn's Orchid (*Sarcochilus australis*) which was taken on 22 Dec. 1832 at Emu Bay — "growing upon the branches of the larger shrubs, especially upon *Coprosma spinosa* [= *C. quadrifida*]".

By far the most assiduous and important early investigator of Circular Head vegetation was Ronald Campbell Gunn who held the position of Police Magistrate in this district for more than two years, Aug. 1836 to 14 Oct. 1838, at an annual salary of £300. Details of his botanical activities there have been preserved in a series of letters written to W. J. Hooker, the illustrious British botanist at Glasgow University (later Director of the Royal Botanic Gardens at Kew). Gunn's letter of 2 September 1836 mentions his appointment as P.M. to the Van Diemen's Land Company's north-western territories (Hampshire and Surrey Hills, Emu Bay, Circular Head and Woolnorth) and concludes: "I think I shall be able to send you a few novelties". The duties were not arduous, allowing Gunn ample opportunity and leisure for collecting botanical as well as other natural history specimens. During these earlier days at Circular Head he gave hospitality to Mr. Thomas K. Short, an unscrupulous quasi-naturalist from Nottingham who then, and for long afterwards, was a "thorn in the flesh" to Gunn. The generous Tasmanian plantsman stood guarantor for Short's mounting debts, and finally had to pay that imposter's creditors the crippling sum of £218.5.6 from his own meagre resources.

On 16 November 1836, three months after his arrival, Gunn wrote to announce shipment of about 150 numbers of dried plants to Hooker from Circular Head district; and he mentioned having also "turned shell collector", with probably 70-100 species to be sent later. Within a few days, 20 Nov. 1836, he again refers by letter to the 156 numbers (617-772, not including cryptogams) which were recently shipped. On 31 March 1837 he describes the packing of "an immense chest of sundries in the Natural History line" and in a separate box a collection of sea-shells — three-quarters of them collected for him by Mrs. Charlotte Smith (née Macdonald), an enthusiastic local resident. The dried plants included specimens from Circular Head, Woolnorth, Rocky Cape, Hampshire and Surrey Hills. Gunn alludes to the epiphytic orchid *Gunnia australis* [= *Sarcochilus australis*] as being "abundant within four to five miles of Circular Head, parasitic on the *Aster argophyllus*, *Pomaderris apetala* and 219"; but he later writes that it came from "a dense almost impenetrable forest" commencing about eight miles south from his house — obviously the forested mountain gullies on basaltic loam around modern South Forest and Mengha.

The algae sent by Gunn to Hooker were apparently all collected by his friend Mrs. Charlotte Smith, wife of John Grant Smith who had come from Glasgow and was then storekeeper with the V.D.L. Company at Stanley. Mrs. Smith is described as a "very estimable fellow resident" to whom Gunn also paid the following tribute:

"I am under the greatest obligations for her great attention in changing my large collection of plants when in paper drying, during my repeated absences to Woolnorth, to the Hampshire Hills and elsewhere, and without her my collection would have been far less, and a great proportion of those collected would have been spoiled."

Among Mrs. Smith's algae where the type specimens of *Dasyphloea tasmanica*, *Gelidium glandulifolium* and *Polyphacum smithiae* — described in her honour ten years later (1847) by J. D. Hooker and W. H. Harvey — also *Rhodymenia coccinea*. The Smith family had arrived at Circular Head in September 1836 and they left the district permanently at the beginning of 1838, Mrs. Smith dying in Launceston on 8 October 1838 at the early age of 29. In 1840 the great British botanist, Dr. John Lindley, honoured Mrs. Smith by bestowing her maiden name upon a new genus of Australian orchids — *Macdonaldia*, which is now merged with *Thelymitra*. The type of his *M.smithiana* [= *T.flexuosa*] had been collected by her near Circular Head.

Finally on 26 April 1838, a year after packing it, Gunn dispatched his second large case of dried material to W. J. Hooker — nos. 773-1117 or 345 collections which were almost entirely from the N.W. coast of Van Diemen's Land. Many were from "The Peninsula or Circular Head"; the orchids, of which J. D. Hooker (1858) cites 30 species, came chiefly from "a belt of heathy plains which extend to Woolnorth" and some of them had been collected by Mrs. Smith. Another small collection of Mrs. Smith's algae was included, also ferns, mosses and lichens of Gunn's own gathering. R. C. Gunn left Stanley on 14 October 1838, upon accepting the position of Assistant Police Magistrate at Hobart; but he was back to collect the orchid *Acianthus reniformis* in Sept.-Oct. 1844, and again in Oct. 1851 he revisited the district and furnished a report to the Royal Society of Van Diemen's Land (1852). He does not seem to have compiled any list of plants occurring on The Nut, but specimens of *Helipterum albicans* var. *incanum* and *Styphelia oxycedrus* (in Kew Herbarium) are proof that he ascended this bluff, at least in Sept. 1838. Among his more noteworthy collections in the district was *Drimys lanccolata* (Mountain Pepper), of which J. D. Hooker (1855) remarks: "descending to the level of the sea at Circular Head". No one else has noted this species anywhere near the sea in far north-western Tasmania, but it certainly grows on the southern portion of King Island at altitudes below 400 ft.; could there still be a survival of this shrub on the almost inaccessible northern ravines of The Nut? Gunn's name is perpetuated in those of at least 16 species of Tasmanian flowering plants, as well as in several cryptogams.

Shortly after Ronald Gunn's departure Commander J. Lort Stokes, during his Admiralty survey of the N.W. Tasmanian coast on H.M.S. *Beagle*, spent the day of 18 December 1838 at the small Circular Head settlement; he returned within a few weeks as the guest of Edward Curr for two days (6-8 February 1839). Surgeon B. Bynoe was the natural history collector on the *Beagle*; but, although he collected bird skins on nearby Three Hummock Island and plant specimens on several other Bass Strait islands, he apparently took none of the latter from Circular Head. There is no mention in Stokes's journal (1846) that he or Bynoe climbed The Nut. In the latter half of 1840 the Polish explorer, Paul (later Sir Paul) Edmund de Strzelecki (1841), made an excursion along the coast of Tasmania's far north-west, including Circular Head where he also was aided by the hospitable Edward Curr; it is doubtful that plant-collecting was part of Strzelecki's programme at the time, and no specimens have been cited from this journey.

Dr. Joseph Milligan, who was surgeon to the V.D.L. Company at Surrey and Hampshire Hills from 1830 to 1841, visited The Nut ("C. Hd. Bluff" on his labels) on 3 November 1841 and collected *Helipterum albicans* var. *incanum* — the specimens now in Melbourne Herbarium. Milligan was by then Inspector of Convict Discipline, but he most probably had made previous visits to the Stanley area. About 1867 Walter N. Bissill of Ravenswood, Vic., collected here a few plant specimens (also in Melbourne Herbarium), although it is not known how he came to be over in Tasmania. T. Stephens M.A., F.G.S. (an Inspector of Schools) was at Circular Head in February 1872, when a local farmer, S. B. Emmett, drew his attention to the rare Slender Tree-fern (*Cyathea cunninghamii*) — 40 ft. high —, probably toward the Arthur River; the occurrence was made the subject of a note to the Royal Society of Tasmania (1873). Stephens revisited this district in 1912, after a lapse of 40 years. H. Thomas A. Murray was Police Magistrate and Customs Collector for Circular Head district in the 1860's and 1870's. He carried on a frequent correspondence with R. C. Gunn (then resident at Launceston and latterly collector of the Western Railway rates). These letters cover the period February 1860 to July 1876 and include many comments on pasture plants and weeds at Circular Head: e.g. we learn that Sheep Sorrel was well established and a nuisance to farmers by December 1860, also that Spotted Medick was becoming a local problem in November 1861.

The name of Skelton Buckley Emmett will always hold a special place among resident botanical observers and collectors in Tasmania's far north-west. Arriving at Circular Head from Hobart in 1835, at the age of 17, he was employed by the V.D.L. Company until 1853 when he returned to the Capital. Emmett came back to Circular Head district in 1856, as a married man, and took up farming at Forest (8 miles south from Stanley) where he remained until retiring again to Hobart a few years before his death in 1898. About 1872 he began corresponding with Baron von Mueller at Melbourne, and a letter of 25 May 1874, describing the luxuriant vegetation of the Arthur River region, doubtless whetted Mueller's own desire to visit these "back ranges," which he did in Emmett's company during the first week in February 1875 — his only excursion to northern Tasmania. The result was a large number of Circular Head specimens for Melbourne's big colonial herbarium. Neither man would seem to have collected any specimens on The Nut; but Mueller obtained the alga *Codium spongiosum* on a Stanley beach. S. B. Emmett later sent plants to Mueller from Mt. Norfolk in the Russell Ranges (1878) and from Mt. Roland near Sheffield (1880).

The Rev. W. W. Spicer (1878) comments on the association of the introduced plants *Trifolium tomentosum* and *Caucalis nodosa* that he saw while at Circular Head (probably about 1875); he returned to England in March 1878 and died at Notting Hill (London) a year later. The Rev. Henry D. Atkinson, Anglican clergyman at Stanley between 1877 and 1890, took a great interest in the flora of the district and especially in forest conservation. He made strenuous efforts to have reserves proclaimed in order to safeguard such rare plants as the Slender Tree-fern (*Cyathea cunninghamii*), but to little avail. His son, the Ven. Archdeacon H. B. Atkinson, later devoted much time to studying the

plant-life of Tasmania, making a large collection of orchids from various localities and recording several species as new to the State. There are a number of specimens in Melbourne Herbarium gathered by Miss Emma Oakden in the course of a short stay at Stanley, 30 January-6 February 1888, one of them being *Helipterum albicans* var. *incanum* from The Nut. A resident of Launceston, she had also within the previous three years forwarded botanical items to F. von Mueller from George Town, Hamilton district and Mt. Wellington. The only other notable botanist at Circular Head last century seems to have been W. A. Weymouth who in April 1892 gathered mosses and lichens in this region (including *Bryum billardieri* on The Nut), some of his numbers being represented at Melbourne Herbarium. Victorian zoologists H. P. C. Ashworth and D. Le Souef, while en route for Albatross Island, spent two days at Stanley (23-25 November 1894). They ascended The Nut, but made no botanical observations or collections there, and remarked on the recent planting of Marram Grass to stay the landward encroachment of beach dunes.

Collectors in the present century have been few and far between. The late Government Botanist of Tasmania, Leonard Rodway, gave no indication that he was personally familiar with the vegetation of Circular Head, although he has cited a number of hepatic species from nearby Trowutta (1917). The late Mrs. Florence Perrin obtained some algae (including *Scaberia agardhii*) at Stanley, but collected more extensively at Montagu and Cape Grim where she went with her husband in three successive years (April 1947, April 1948 and April 1949). Mr. Harold Trethewie, secretary to the Stanley Marine Board, collected orchids between Stanley and Forest during 1946, his specimens embracing the long "lost" *Prasophyllum brachystachyum* (from its type locality) which was submitted to the late W. H. Nicholls (1948). From January 1931 to December 1941 Mr. M. J. Firth taught natural science at the Smithton High School, conducting a number of field excursions over the surrounding button grass plains and heaths where orchids were abundant. Latterly, as District Horticultural Officer with the Department of Agriculture at Devonport and then Wynyard, his increasing preoccupation with these intriguing flowers has culminated in the useful, illustrated monograph *Native Orchids of Tasmania* (1965), wherein are many references to Circular Head and other parts of the far north-west.

As supervisor of natural history instruction

in Tasmanian State Schools, Miss Janet Somerville visited Stanley several times during the 1940's and 1950's. She took the opportunity to explore The Nut, made collections of the more interesting flora thereon and compiled a list of species. Her specimens and notes should be among material left at Hobart when Miss Somerville came to live in Melbourne in 1963, for the sake of her health. The late Raleigh A. Black, whose excellent herbarium of Tasmanian plants was purchased for the National Herbarium of Victoria in 1957, spent two days in the autumn of 1947 (23-24 April) between Smithton and Woolnorth, visiting Cape Grim and Woolnorth Point as guest of Mr. George Wainwright (V.D.L. Co. Manager). A small botanical collection, including the endemic *Eucalyptus simmonsii*, was made in this district. Finally, during the past 15 years Mr. W. D. Jackson (Botany Dept., University of Tasmania) has made extensive collections of eucalypts along the N.W. coast, including Rocky Cape, Smithton and Woolnorth, but not the Stanley Peninsula.

THE FUTURE OF THE FLORA

With the advent of mechanised farming since World War II, drainage of remaining swamps and reclamation of poor heathlands through treatment with trace elements, much scrubby country previously regarded as worthless has now been cleared for settlement. Repeated fires are inexorably reducing the protective shrubberies on coastal dunes and sand-spits, permitting wind erosion. All around the north-west coast a retreat of native flora is increasingly evident, and the process is likely to accelerate. Some very localised plants are already in a precarious position, e.g. the limited occurrence of Saw Banksia (*B. serrata*) near Sisters Creek, for the preservation of which a body of enthusiastic naturalists is now endeavouring to secure a sizeable reserve in that area. A swampy heath at Rocky Cape is the only known habitat in Tasmania for a rare onion-orchid (*Microtis orbicularis*); efforts to secure the reservation of this tract also would be commendable. The last vestige of paperbark swamp at Stanley (between the State School and Green Hills) is another small area worth leaving intact as a sample of the fast-vanishing ecosystems in this fertile part of Tasmania. The question arises: "is there anything still worthy of protection on The Nut, after 140 years of destruction and exploitation?" The writer would answer in the affirmative.

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